



**CHEME ADVANCE**

# Low-Temperature Sludge Dryer

*Compact, Efficient, Sustainable*



**CHEME  
ADVANCE**

YOUR INNOVATIVE ONE-STOP CENTRE FOR ENVIRONMENTAL SOLUTIONS

WITH OVER 20+ YEARS OF EXPERIENCE, SERVICING ALL ACROSS MALAYSIA

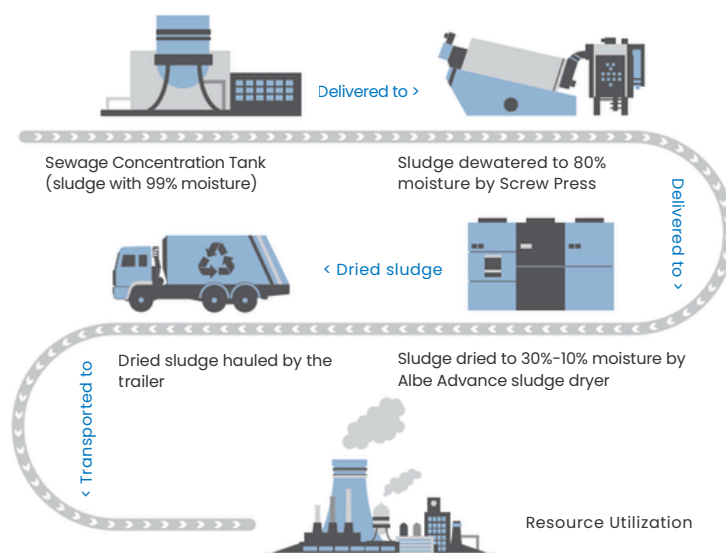


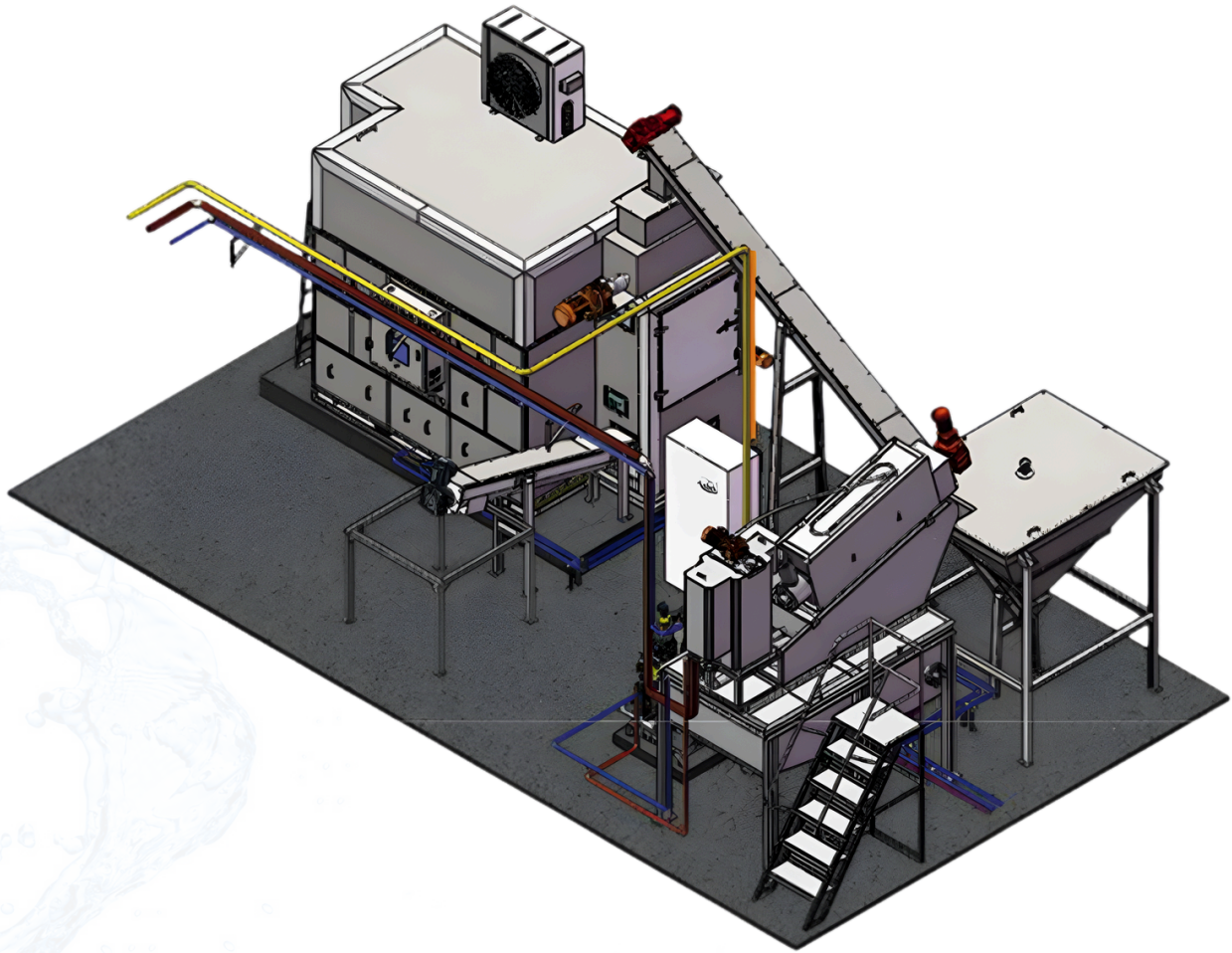
The **Cheme Advance Low-Temperature Sludge Dryer** reduces sludge moisture from 65%–83% to 10%–30%, cutting volume by up to 90% and eliminating up to 90% of bacteria.

Designed for municipal and industrial sludge, it offers:

- **Low energy** use and **no secondary pollution**
- **Applicable across multiple industries**, including printing, papermaking, electroplating, chemical processing, leather production, and pharmaceuticals.
- **Dried sludge output is suitable** for further utilisation through gasification, co-combustion, composting, or as a raw material in construction products.

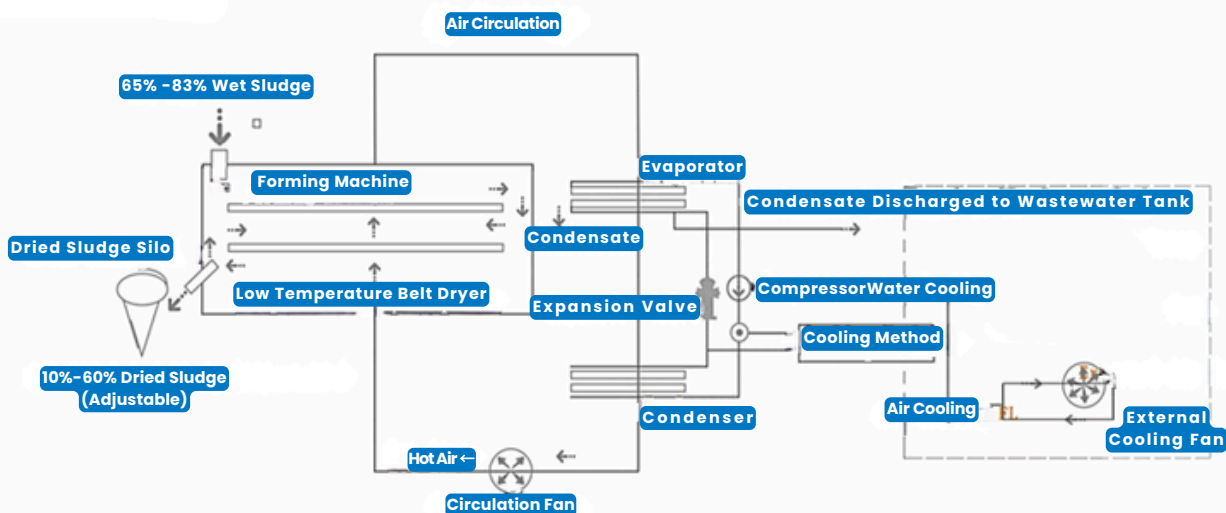
*Smaller footprint, cleaner operation, and sustainable disposal—all in one system.*





**Working Principle – Low-Temperature Sludge Dryer**

The Cheme Advance Low-Temperature Sludge Dryer operates on a **Dehumidification Heat Pump** principle. Heated air is circulated through the wet sludge on a conveyor belt, efficiently evaporating its moisture. The process is carried out in a **fully closed-loop system**, ensuring **minimal heat loss** and maximising energy efficiency.





### **Integrated Modular Design**

The integrated design of the drying room and heat pump improves the sealing performance of the air duct structure. The modular design and production of components, along with modular packaging and transportation, enable fast on-site installation.

### **Stainless Steel 316L Evaporator and Condenser Tube Design**

The refrigerant pipeline is made from stainless steel 316L, providing superior corrosion resistance.

### **Compressor, Valve, and Electrical Components with Independent Chambers**

The compressor, expansion valve, and electrical components are housed in independent chambers, completely isolated from the air duct. This minimises the impact of corrosive gases and humid air, improving stability and extending service life.

### **Full Stainless-Steel Corrosion-Resistant Construction**

All parts and components in contact with sludge are made from stainless steel 304 as standard. Stainless steel 316L can be selected based on site conditions and customer requirements for enhanced durability.

### **Upgraded Sludge Drying Performance**

A specialised imported drying compressor is used to better meet the demands of sludge drying conditions. The heat exchange system is upgraded, improving heat exchange and dehumidification performance by more than 15% for better overall results.

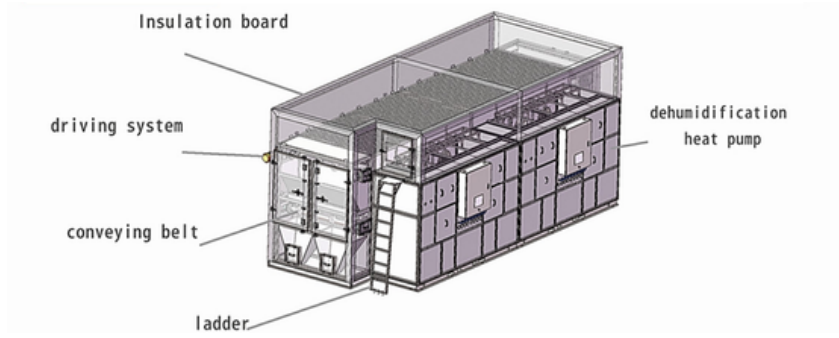
### **Internet of Things (IoT) Platform Technology**

Key operating parameters and real-time operating status of the equipment can be transmitted to mobile phones and computers via IoT technology, allowing remote monitoring and control of the equipment's status.

### **Automatic Dust Removal and Air Lock Design**

Some models feature an automatic dust removal configuration, which enhances filtration efficiency and reduces labour costs. Various closed air schemes are adopted to discharge dust without air leakage, minimising the overflow of dust and odour.

## EXTERNAL STRUCTURE



Parameter	SD1200	SD2400	SD3600	SD4800	SD7200	SD9600
Standard Water Removal Rate (24h)	1200 kg	2400 kg	3600 kg	4800 kg	7200 kg	9600 kg
Standard Water Removal Rate (h)	50 kg	100 kg	150 kg	200 kg	300 kg	400 kg
Total Power	31 kW	48 kW	77 kW	92 kW	146 kW	153 kW
Running Power	19 kW	36 kW	61 kW	68 kW	114 kW	129 kW
Heat Pump Module Qty	1 set	1 set	1 set	2 sets	2 sets	2 sets
Compressor Qty	1 set	4 sets	4 sets	8 sets	8 sets	8 sets
Cooling Method	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling	Air cooling
Overall Size (mm)	3500×1600×2700	3960×2160×2400	4100×2600×2700	6660×2160×2400	6900×2600×2700	7920×2980×2780
Structure	Completed	Completed	Completed	Completed	Completed	Completed
Weight	2.4 t	3.6 t	4.1 t	5.1 t	7.2 t	9.4 t

## ADDITIONAL TECHNICAL SPECIFICATIONS

Item	Specification
Refrigerant	R134a
Power Supply	(220V / 380V / 440V) / 3-phase / 50Hz or 60Hz, customised options available
Drying Temperature	48–56°C (air return) / 65–80°C (air supply)
Control System	Touchscreen + PLC programmable controller
Range of Wet Sludge at Inlet	65%–83% moisture content (varies depending on sludge type and adaptability)
Moisture Content After Treatment	Adjustable via frequency control: 10%–60% (final moisture content depends on the initial sludge moisture level)
Forming Method	Strip cutting or strip extrusion (selected based on sludge moisture content and characteristics)

**OUR RESULTS**

**Sludge Trial For Automotive Industry (SW204 Wastewater Sludge)**



**Initial Condition:**  
Wet Sludge Weight: 22 kg



**Results:**  
Total Weight Reduction = **16.8kg**  
% Total Weight Reduction = **76.36%\***

**Sludge Trial For Adhesive Manufacturer (SW204 Wastewater Sludge)**

\*PRIMARY DEWATERING SYSTEM: Screw Press



**Initial Condition:**  
Sludge Weight: 25.3kg



**Results:**  
Total Weight Reduction = **19.8kg**  
% Total Weight Reduction = **78.3%\***

**Sludge Trial For Automotive Industry (SW416 Paint Sludge)**

\*Without going through PRIMARY DEWATERING SYSTEM, the system is able to dry the sludge



**Initial Condition:**  
Wet Sludge Weight: 27kg



**Results:**  
Total Weight Reduction = **14.2kg**  
% Total Weight Reduction = **52.3%\***

**Sludge Trial For Adhesive Manufacturer (SW204 Wastewater Sludge)**

\*PRIMARY DEWATERING SYSTEM: Filter Press



**Initial Condition:**  
Sludge Weight: 24.8kg



**Results:**  
Total Weight Reduction = **18.6kg**  
% Total Weight Reduction = **75%\***

**OTHER RESULTS**



**Petrochemical Industry**  
Moisture Content achieved: **5~10%\***



**Steel Industry**  
Moisture Content achieved: **12~22%\***



**Recycle Plastic Industry**  
Moisture Content achieved: **15~25%\***



**Oleochemical Industry**  
Moisture Content achieved: **5~15%\***



**Fermentation Industry**  
Moisture Content achieved: **30% & Below\***



**Aluminum Industry**  
Moisture Content achieved: **10% & Below\***

\*Results might differ depending on the sludge condition output from the primary dewatering system.



**CHEME  
ADVANCE**

# Your Innovative One-Stop Center For Environmental Solution

*With over 20 years of experience in industrial wastewater treatment, we bring proven expertise in delivering environmental solutions across a wide range of industries.*



## **MULTI-DISC SCREW PRESS (MDSP)**

Our Multi Disc Screw Press (MDSP) is a **fully automated** sludge dewatering system that requires minimal operator attention, **reducing manpower** needs while maintaining stable performance. **Compact and energy-efficient**, it continuously reduces sludge volume and disposal costs with low noise and simple maintenance.

## **DISSOLVED AIR FLOATATION (DAF)**

Our Dissolved Air Flotation (DAF) system delivers **efficient separation of suspended solids, oil, and grease** from wastewater. **Compact and reliable**, it enhances effluent quality, reduces downstream load, and ensures compliance, making it an ideal solution for industries with high-strength wastewater challenges.



## **AUTO POLYMER PREPARATION SYSTEM (APPS)**

Our Auto Polymer Preparation System (APPS) ensures **consistent, fully-automated polymer solution preparation** for sludge dewatering and wastewater treatment. By **optimising polymer mixing and dosing**, APPS reduces chemical wastage, improves efficiency, and delivers stable system performance with minimal operator intervention.

## **MEMBRANE BIOREACTOR (MBR)**

Our Membrane Bioreactor (MBR) system delivers **reliable solids separation** while significantly **reducing the space required** for aeration tanks. With its **compact design and high treatment efficiency**, it provides industries with a smart, space-saving solution for producing high-quality effluent.



## **TURBO BLOWER**

Our Turbo Blower provides **high-efficiency aeration** with **lower energy consumption, reduced noise, and minimal maintenance**. Compact and durable, it delivers stable airflow to optimise biological treatment, helping industries cut operating costs while ensuring reliable wastewater performance.



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